

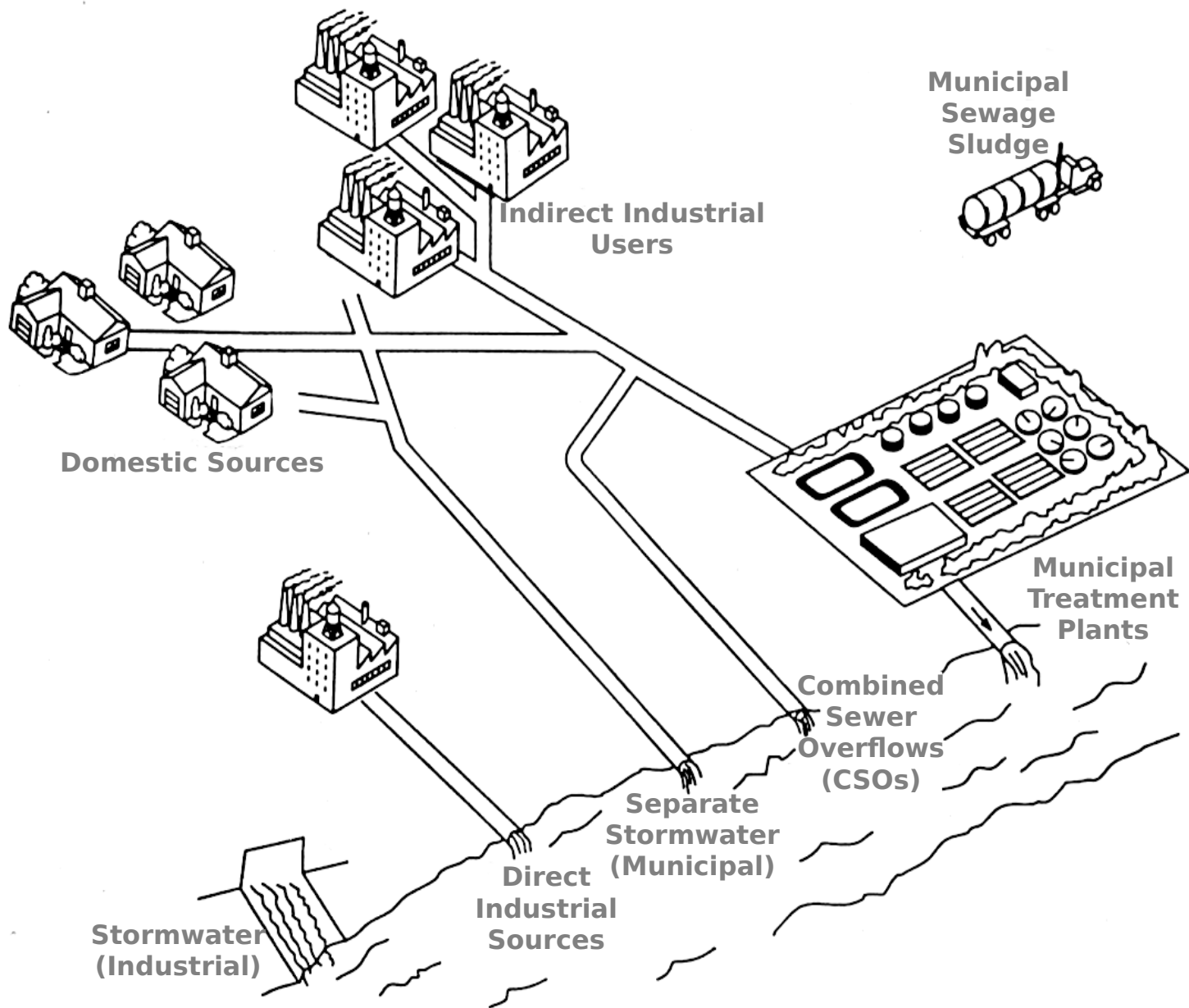


Clean Water Act Primer

Overview

- Seeks to protect surface water by requiring discharge of pollutants to be controlled or prevented





Camp Swampy



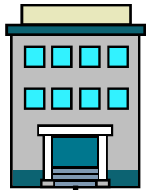
DENTAC



Outfall



Admin

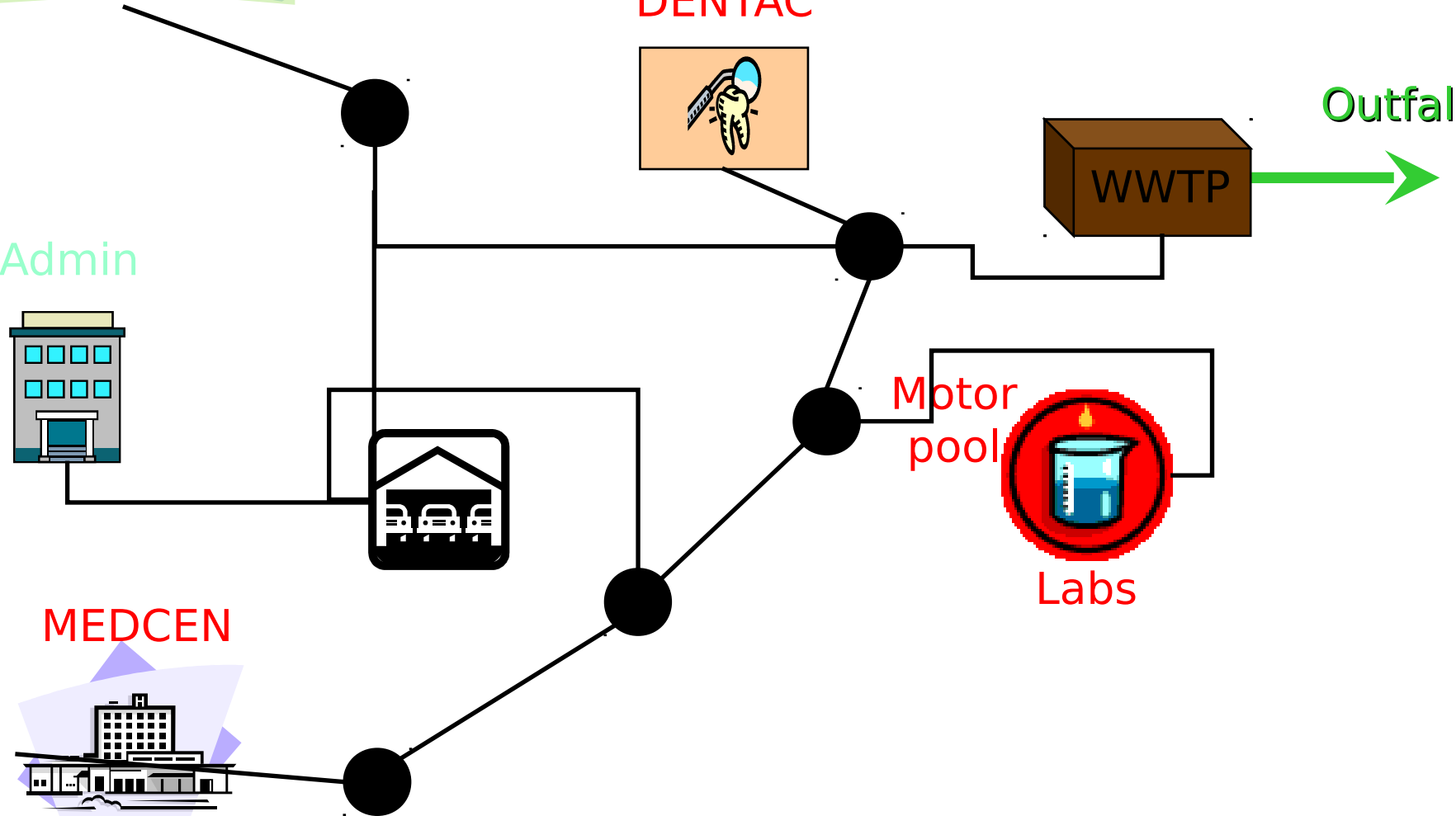


Motor pool



Labs

MEDCEN



National Pollutant Discharge Elimination System

- Regulatory framework that translates the legislative discharge prohibition into a set of individual discharge permits

The “typical” NPDES permit -

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the permittee is authorized to discharge from the following point source(s) outfall(s), described more fully in the permittee's application:

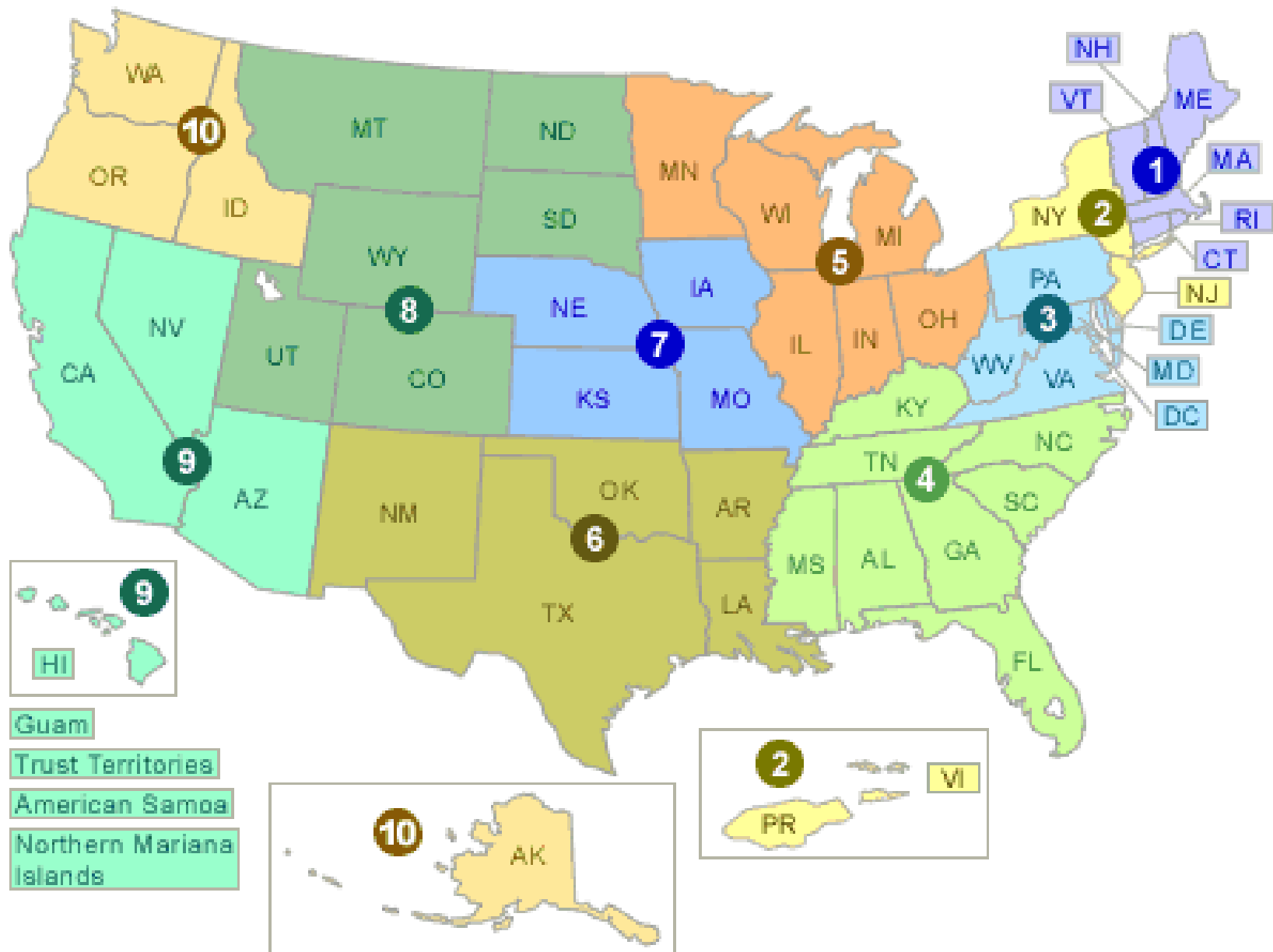
Effluent Limits

EFFLUENT CHARACTERISTIC	UNITS	DISCHARGE LIMITATIONS		
		Daily Minimum	Daily Maximum	Monthly Average 2/
Flow	MGD	-	Monitor	0.62
pH	s.u.	6.0	8.5	-
Biochemical Oxygen Demand, 5-day	mg/l	-	45	30
Total Suspended Solids	mg/l	-	45	30
Ammonia as Nitrogen	mg/l	-	15	10
Fecal Coliform	#/100 ml	-	200	Monitor
Total Residual Chlorine 5/	mg/l	-	0.83	0.48
Chronic Toxicity Biomonitoring 4/	% Difference	-	No Difference	-

Monitoring

Frequency	Type
Continuous	Totalized
Daily	Grab
1/week	Composite 3/
1/week	Composite 3/
1/week	Composite 3/
1/week	Grab
1/week	Grab
1/quarter	Composite

Standard
Conditions
Special
Conditions



<http://cfpub1.epa.gov/npdes/stateinfo.cfm>

<http://cfpub2.epa.gov/npdes/statestats.cfm>

State	Approved State NPDES Permit Program	Approved to Regulate Federal Facilities	Approved State Pretreatment Program	Approved General Permits Program	Approved Biosolids (Sludge) Program
Alabama	*	*	*	*	
Alaska					
American Samoa					
Arizona	*	*	*	*	
Arkansas	*	*	*	*	
California	*	*	*	*	

NPDES Permitting Process

File permit application 180 days before
expiration or begin discharge



Draft permit issued (includes fact sheet)



30 day period for public comment

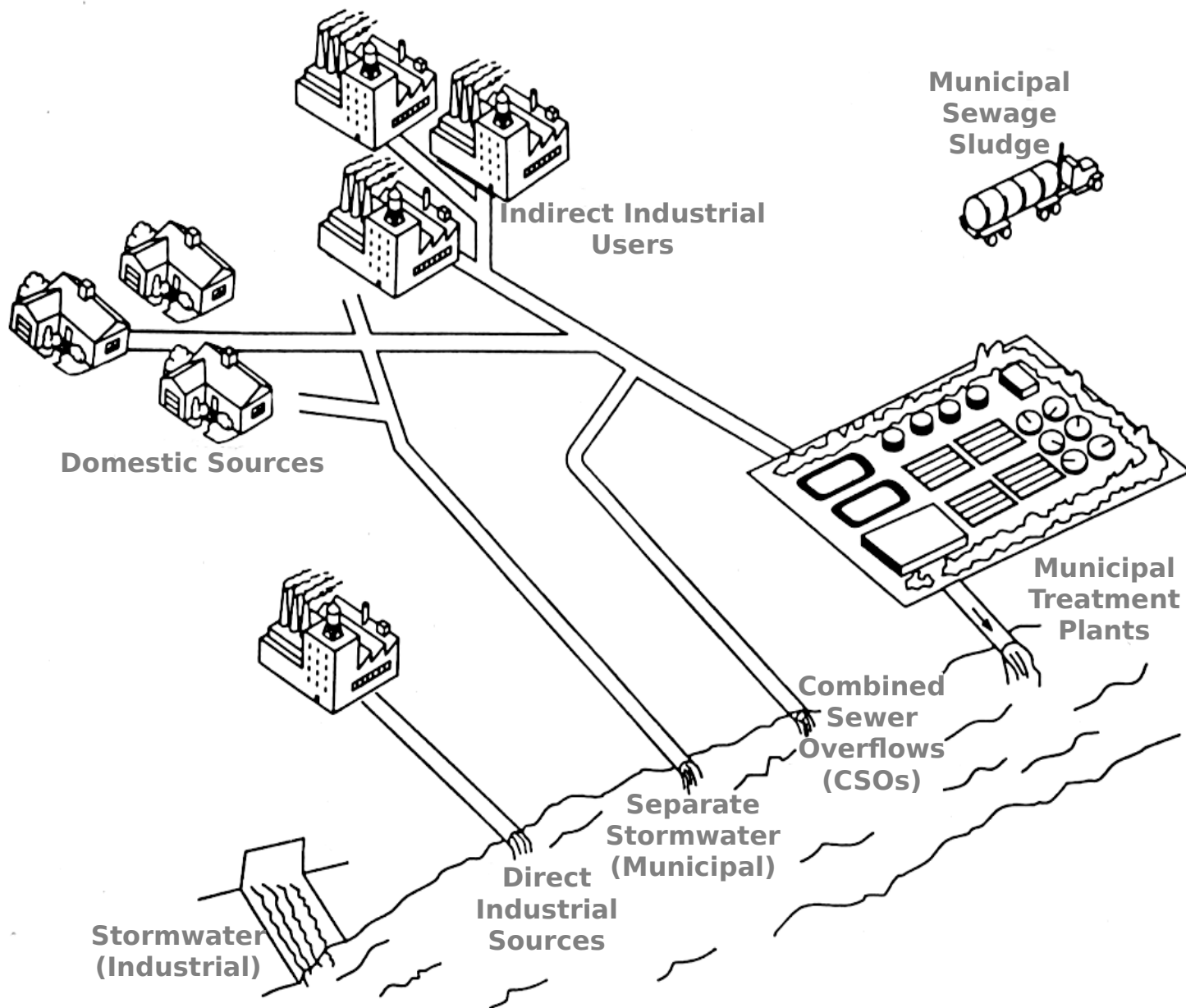


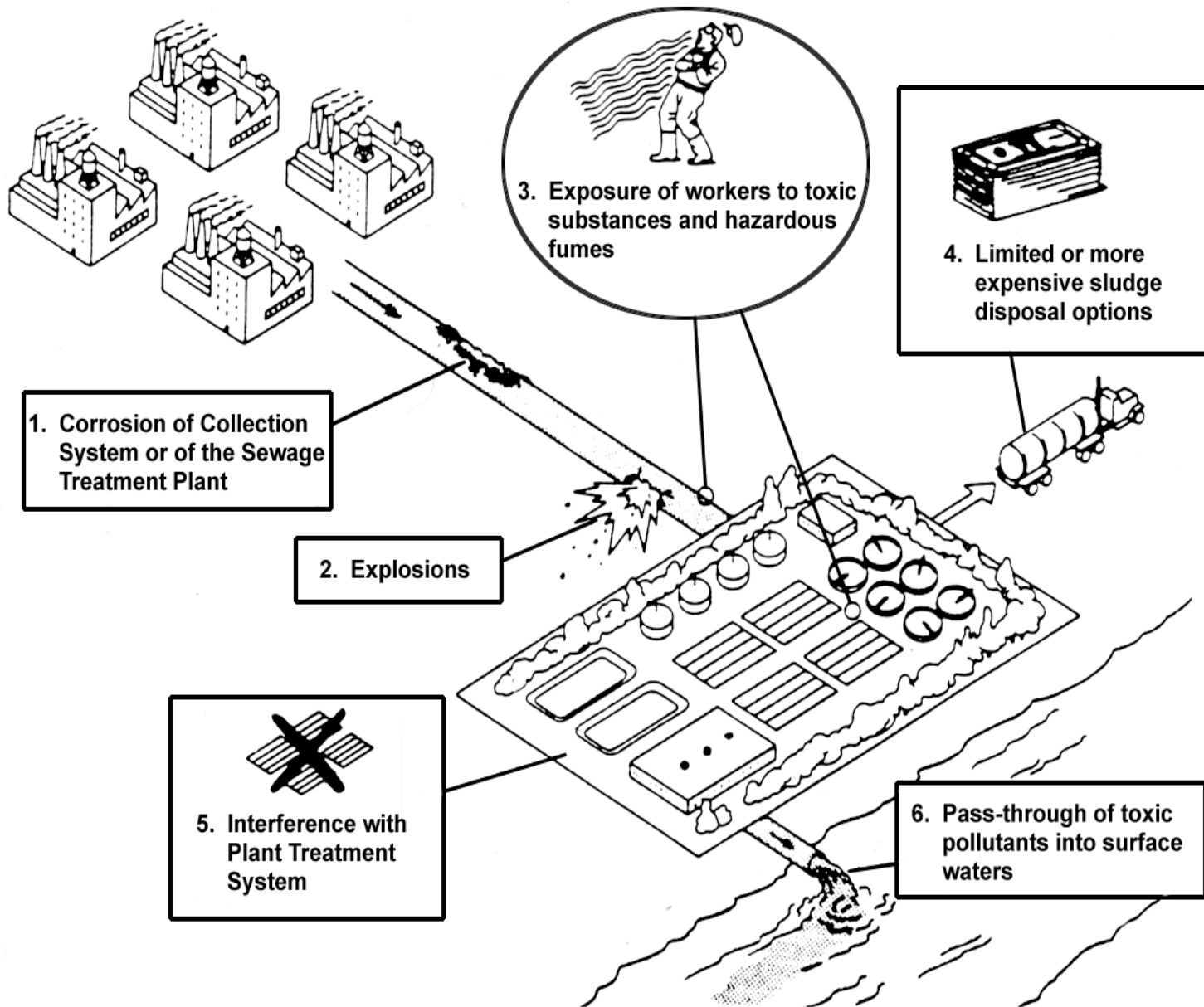
Permit becomes effective 30 days after issuance

NPDES Permit Renewal

WHAT SHOULD YOU DO?

- Compare draft permit with old permit
- Compare draft permit discharge limitations with recent effluent monitoring data
- Send draft permit to CHPPM for review



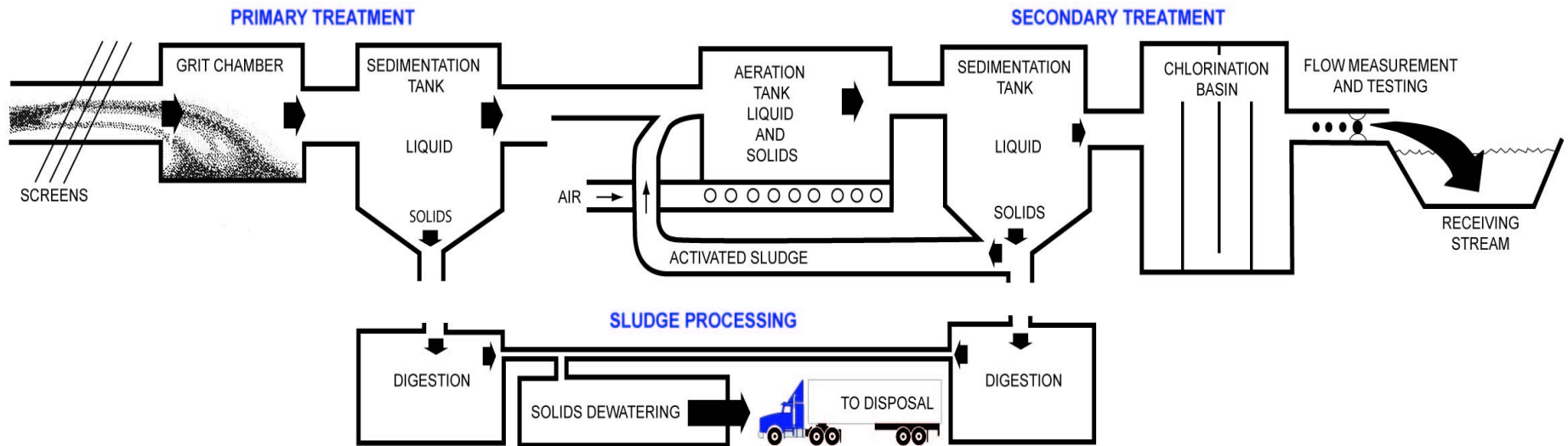


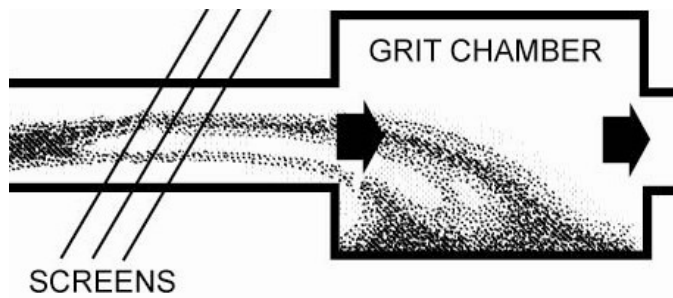
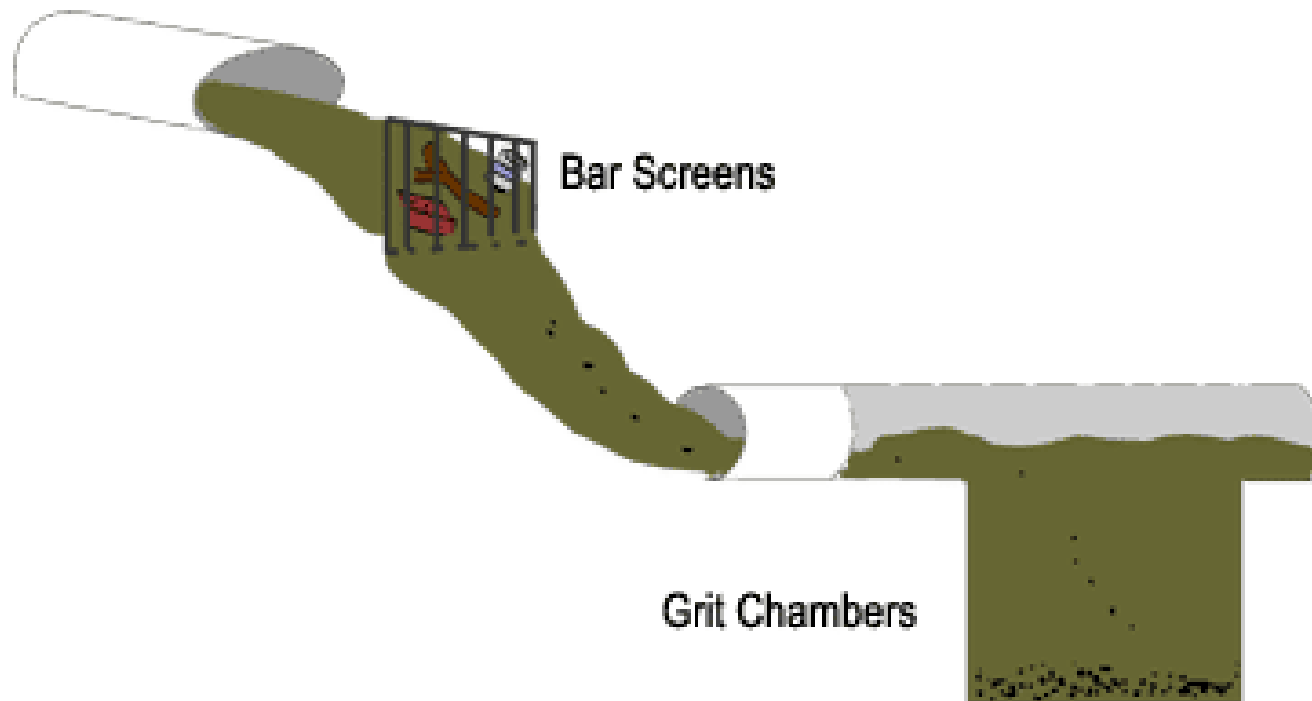
Privatization





Wastewater Treatment

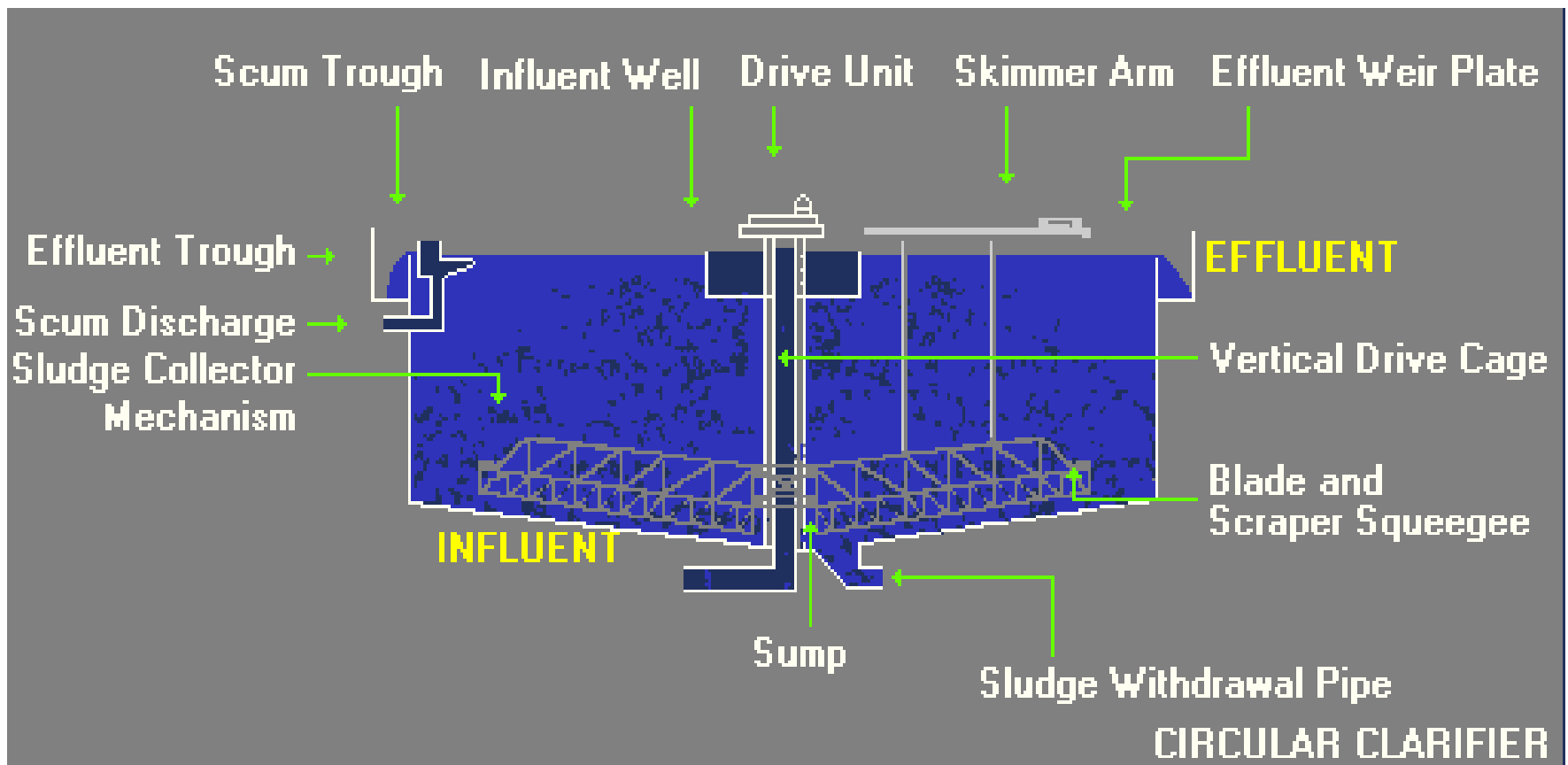
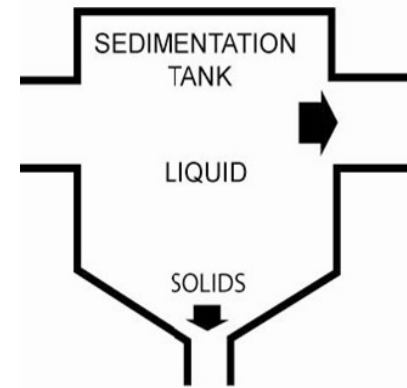






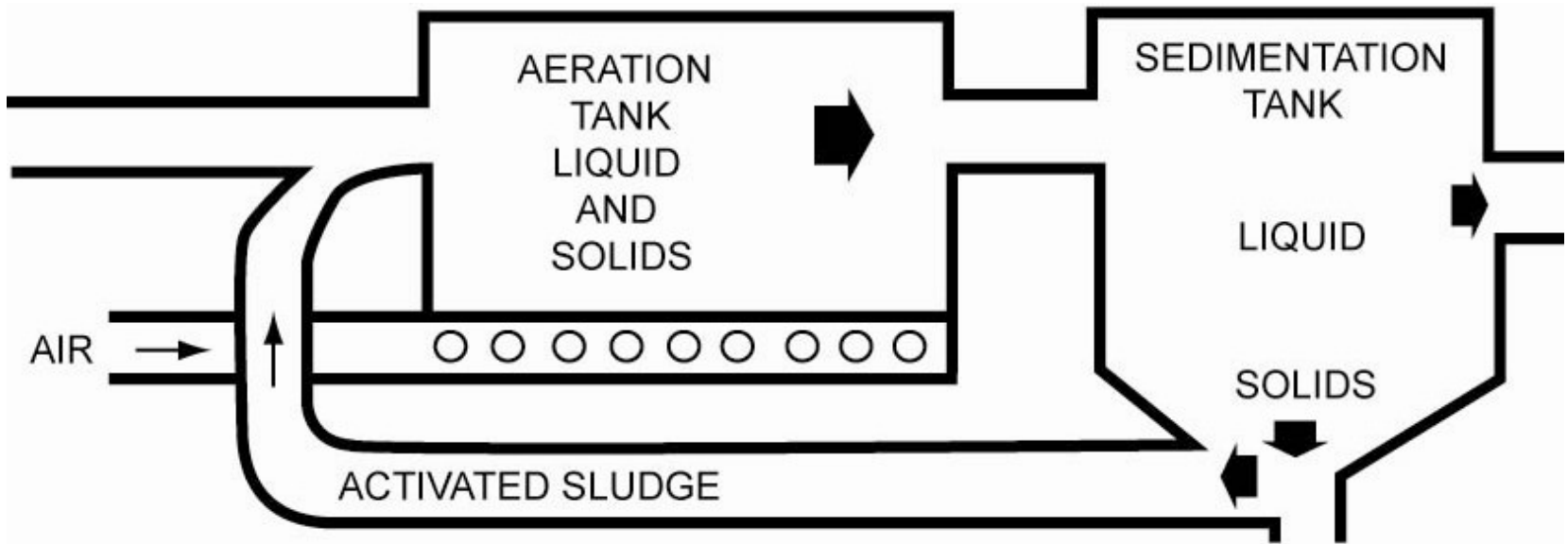


Primary Clarifier



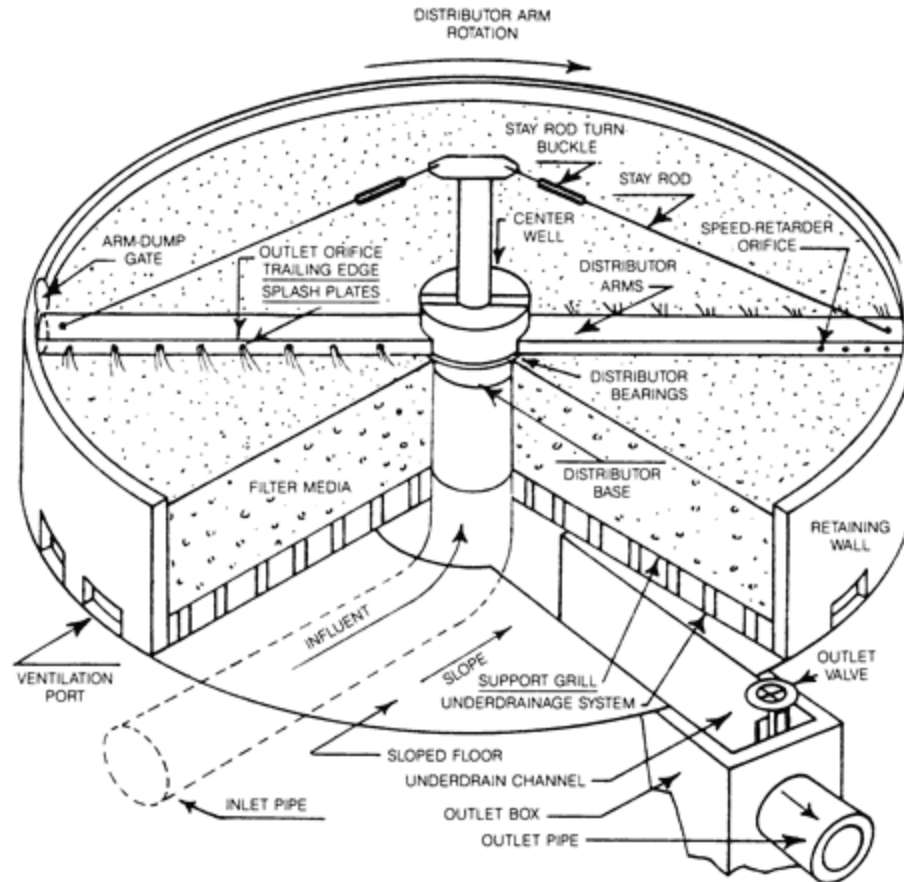


Activated Sludge

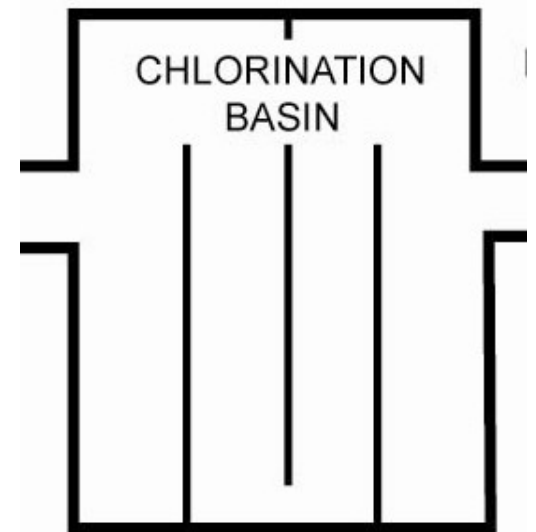


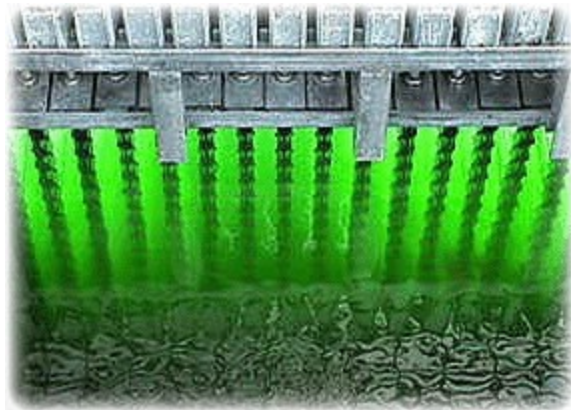


Trickling Filter









UV Disinfection



SUSSEX COUNTY
MUN. UTL. AUTH.
NURSER: NJ0053350
NURSER HOTLINE:
609-292-7772
DISCHARGE SERIAL # 001

Storm Water



Regulation of Storm Water

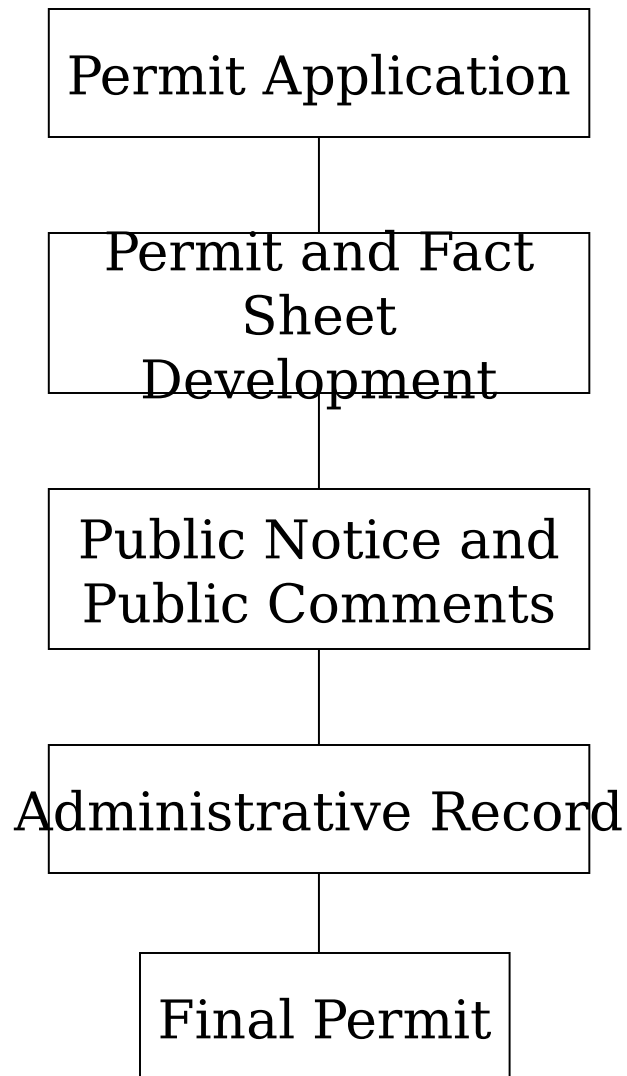
- Industrial activities (phase 1)
- Small municipal separate storm sewer system (phase 2)
 - Located in urbanized area
- Construction activities
 - Encompassing 1 acre or more

General Permits

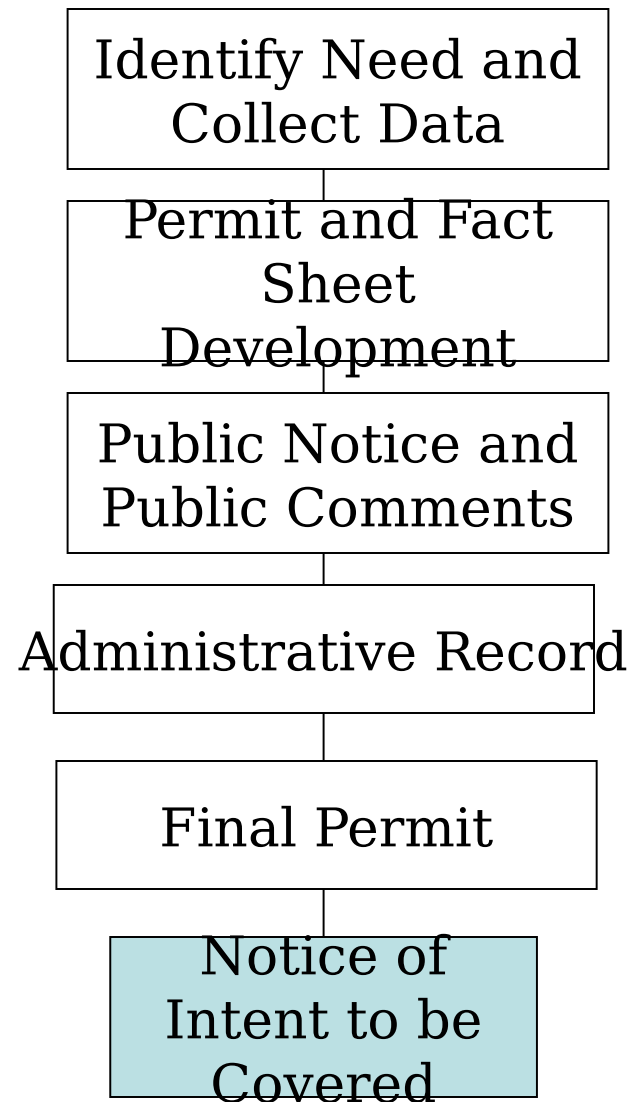
- Authorizes a category of point source discharges within a geographical area
- Advantages:
 - Economical
 - Consistent permit conditions



Individual Permit

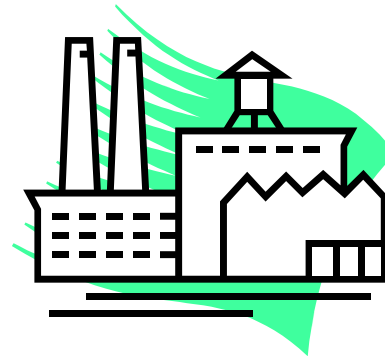


General Permit





Industrial Activities (storm water phase 1)



Typical Industrial Activities - 1

(on Army Installations)

- Transportation Facilities
 - Maintenance activities
 - transportation motor pools
 - airports
- Landfills and open dumps
 - Handled industrial waste



Typical Industrial Activities - 2

- Recycle Facilities
 - DRMO yards, scrap yards, battery reclaimers
- HWTSDF
 - RCRA permitted sites
 - OB/OD areas
- Solid Waste Management Units
 - Those with exposed materials



Typical Industrial Activities - 3

- Sewage Treatment Plant
 - > 1 million gallons/day design capacity
- Bulk Petroleum Areas



EPA's Multi-Sector General Permit

- NOI
 - Certification of no adverse impact on endangered species and in compliance with the National Historic Preservation Act
 - Certification that a Storm Water Pollution Prevention Plan has been prepared.

Storm Water Pollution Prevention Plan

- Major Elements
 - Pollution prevention team designation
 - Evaluation of potential pollutant sources
 - Description of Best Management Practices (BMP)
 - schedule for implementation
 - Documentation of annual site inspections

BMPs -1

- Good housekeeping
- Preventive maintenance of storm water controls
- Spill prevention and response procedures



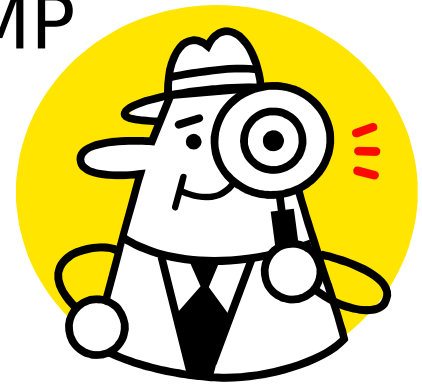
BMPs -2

- Routine inspections
- Employee training
- Erosion and sedimentation evaluation
- Traditional storm water management measures
 - Oil/water separators
 - Detention ponds
 - Vegetative swales



Inspections

- Comprehensive Site Compliance Evaluation
 - Annually
 - Inspect for storm water contamination
 - Evaluate effectiveness of BMP
 - Revise plan
 - Document with report



Monitoring/Reports

- Visual Monitoring
 - Quarterly
 - Indication of storm water pollution
- Benchmark Monitoring
 - Required for certain sectors of industrial activity
 - Quarterly during permit years 2 & 4
 - Compared to benchmark levels
- Annual Compliance Monitoring
 - e.g., coal pile runoff

Identified Problems

- Annual Comprehensive Site Compliance Evaluations are not being performed
 - Paper work not being completed
- Quarterly visual exams are only being conducted sporadically
- Some sites included in SWPPP do not meet the definition of industrial activity

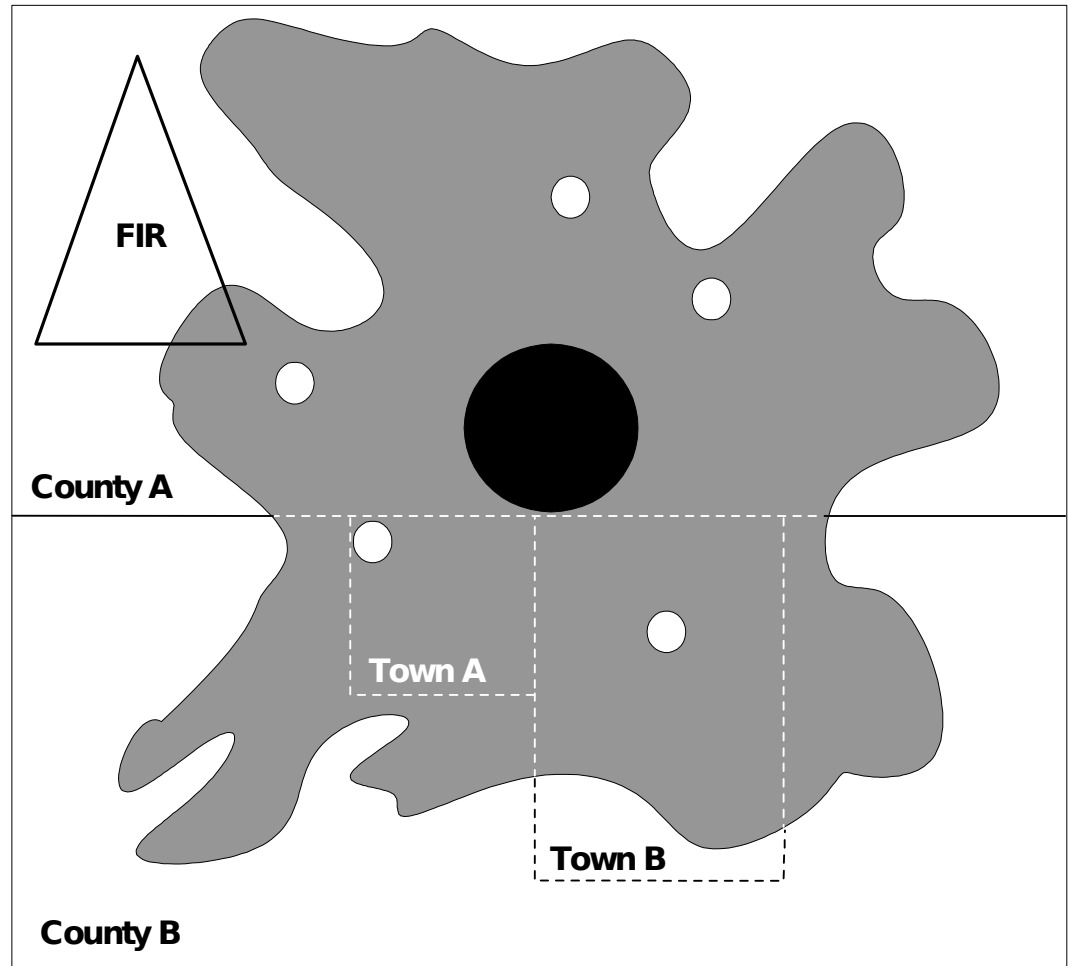
Small Municipal Separate Storm Sewer System (MS4) (storm water phase 2)

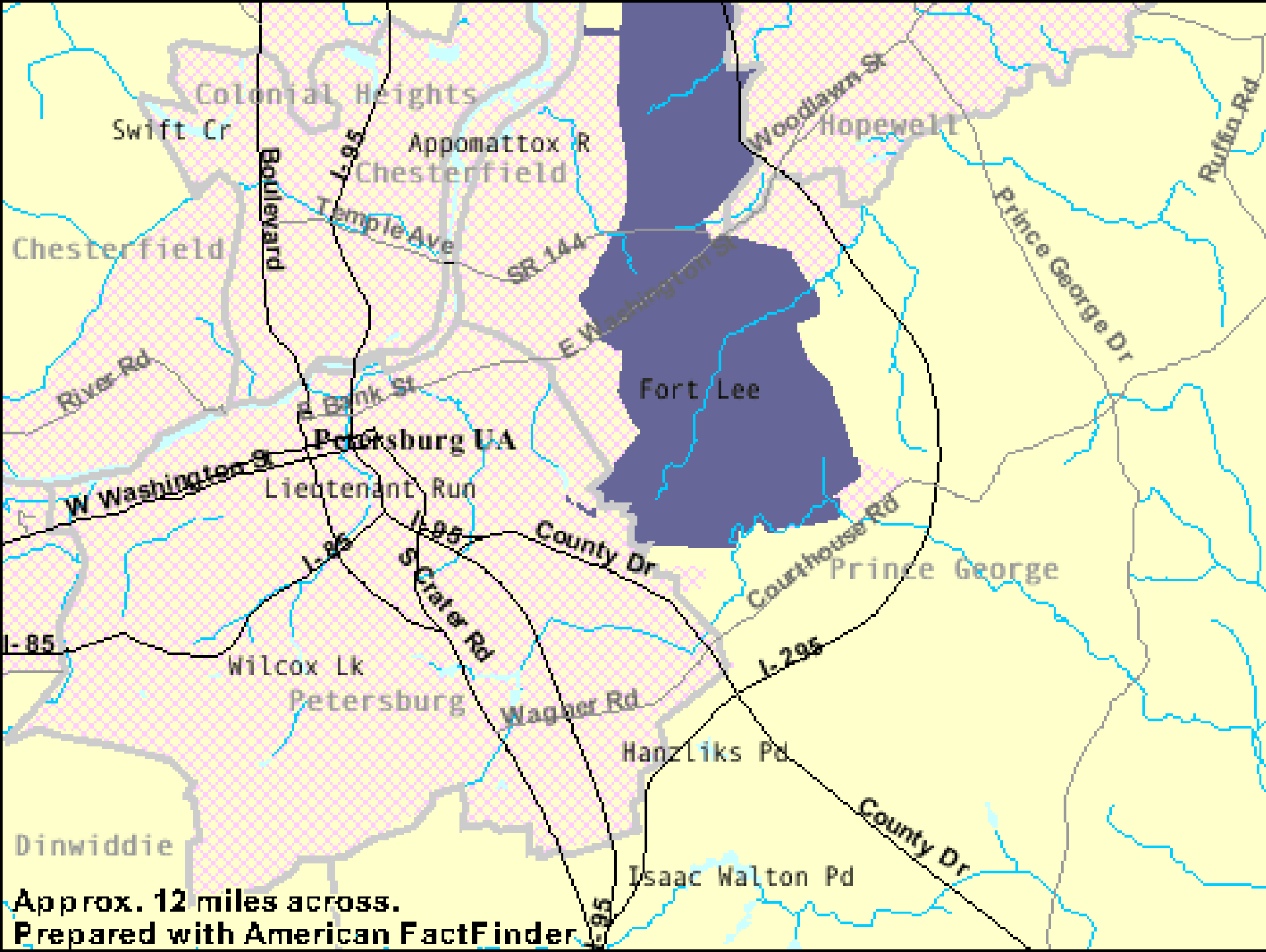


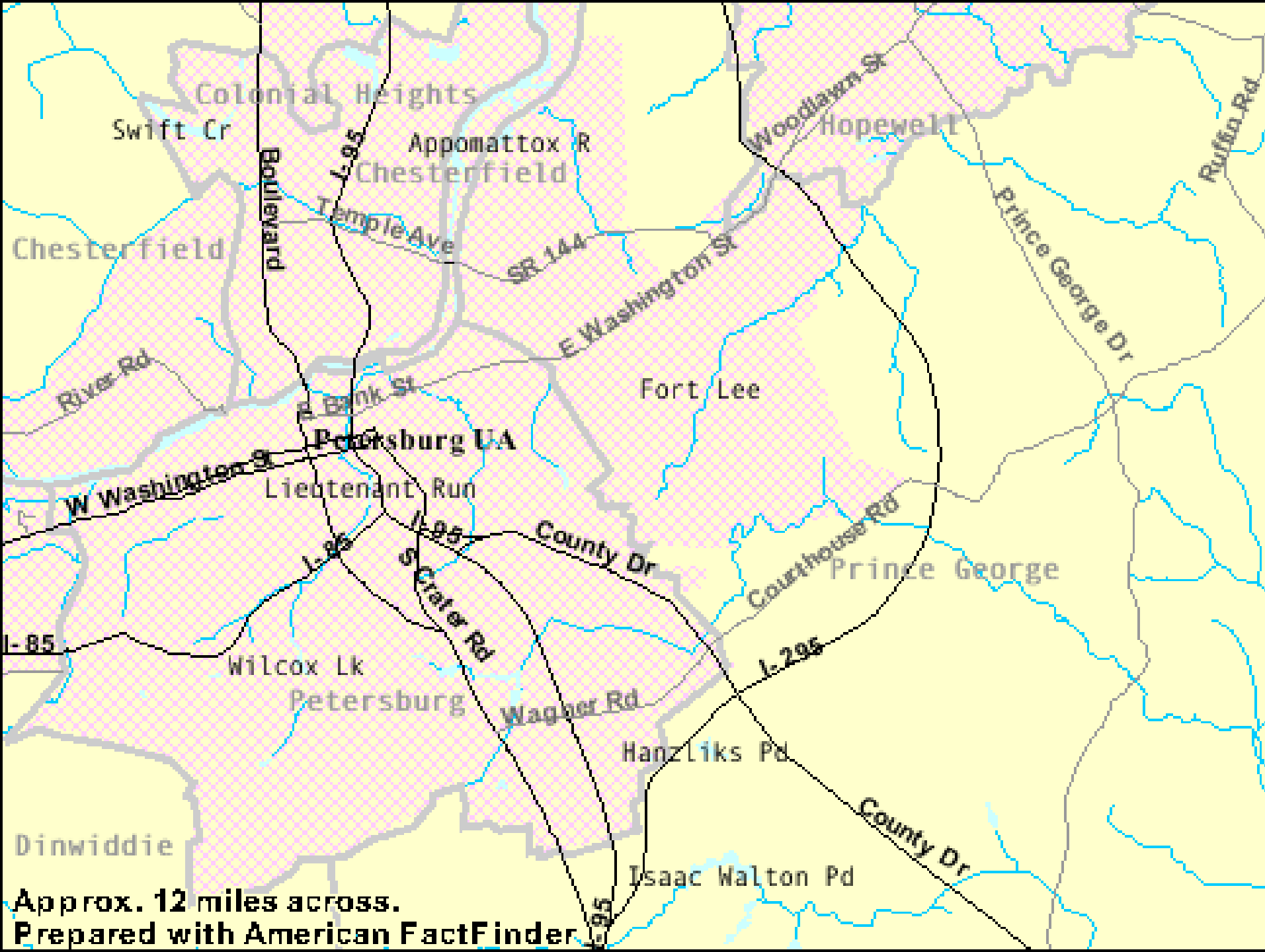
Urbanized Area Map

<http://factfinder.census.gov/servlet/BasicFactsServlet>

- Central Place
- Incorporated Place
- △ Federal Installation







Storm Water Phase II Rule

- Implements Storm Water Management Program to reduce the discharge of pollutants to the “maximum extent practicable”
- Identifies six minimum control measures
 - Appropriate best management practices (BMP)
 - Measurable goals for each
- Industrial activities are not specifically addressed

Six Minimum Control Measures

1. Public education and outreach
2. Public participation and involvement
3. Illicit discharge detection and elimination
4. Construction site runoff control
5. Post-construction site runoff control
6. Pollution prevention/good housekeeping

General Permitting

- Regulated small MS4 must submit an NOI for coverage under Storm Water Phase II General Permit.
- NOI must include:
 - Appropriate BMP and measurable goals for each of the six minimum control measures
 - Timing and frequency of actions
 - Person responsible for completing these actions
- EPA “Storm Water Phase II Compliance Assistance Guide” EPA 833-R-00-002, Mar 00

1 - Public Education and Outreach

- “Public”
 - Includes residents and employees on post
- Educational program implemented
 - Includes distribution of educational materials
- POC for CHPPM educational materials
 - Wendy.Mervine@us.army.mil

Posters



ARE YOU CLEANING UP AFTER YOUR PET?

Keep your drain clean for those downstream

Pet Waste and Storm Water Quality

Pet waste can:

- Enter streams and rivers during storms.
- Harm fish and degrade water quality.
- Transmit diseases to children.
- Make recreational water unsafe.

Tips for proper disposal:

- Flush it.
- Bury it.
- Trash it.

Contact Environmental at (910) 341-8425.

Improving Storm Water Quality



DON'T DUMP HERE...



... IT ENDS UP HERE

Keep your drain clean for those downstream

Contact Environmental at (910) 341-8425.

Improving Storm Water Quality



DON'T POLLUTE

Keep storm drains clean
for those downstream!



For further information, contact the installation environmental office at (xxx)xxx-yyyy.

2 - Public Participation and Involvement

- Create opportunities for public participation in storm water program
 - Community meetings and organized clean-up efforts
 - Information provided in
 - Involve clubs/groups
 - “adopt a storm drain” program



3 - Illicit Discharge Detection and Elimination

- “Illicit Discharge”
- Detection and elimination program
 - Storm water map with location of outfalls
 - Regulation prohibiting non storm water discharges
 - Public education effort
 - Plan of action
 - identify likely areas for illicit discharges
 - trace sources
 - remove illicit discharges
 - document actions



Allowable Non-Storm Water Discharges

- Water-line flushing
- Irrigation
- Ground water infiltration
- Potable water sources
- Foundation/footing drains
- Air conditioning condensate
- Lawn watering
- Individual residential car washing
- Street washing



4 Construction Site Runoff Control

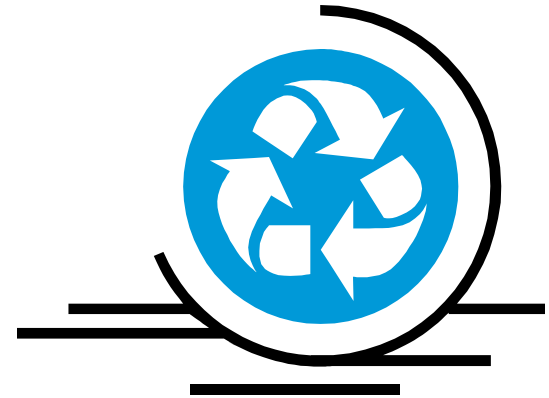
5 Post-Construction Runoff Control

- All construction sites disturbing > 1 acre
- Policy letter/ordinance
 - Outlines control, procedures, and enforcement provisions during construction activity
- Program
 - Reduce post construction site runoff



6 - Pollution Prevention/Good Housekeeping

- Develop O&M program for its storm sewer system
- Train employees
 - Pollution prevention
 - Spill prevention
 - Good housekeeping
- BMP and measurable goals



Monitoring/Reports

- Annual reports
- Address status of compliance
 - Appropriateness of BMP
 - Progress towards measurable goals
 - Results of information collected
 - Activities planned for next reporting cycle
 - Any changes in BMP or measurable goals

Construction Activities



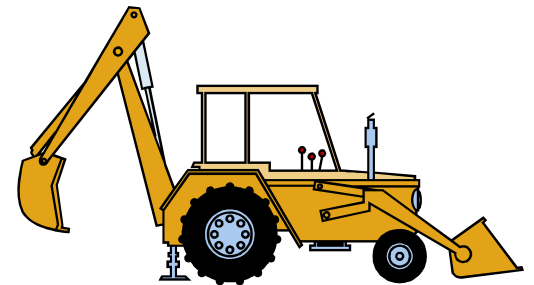
Construction Storm Water Permitting

- Covers construction activities > 1 acre
 - Clearing grading, excavating, stockpiling of fill
- Construction General Permit
 - The “operator” submits the NOI
 - Storm Water Pollution Prevention (SWPPP)



Construction SWP3

- Tells how the operator will control storm water runoff
- Basic tenets:
 - Divert SW away from disturbed areas
 - Install BMP to control erosion
 - Inspect regularly and maintain BMP
 - Revise SWPPP as site condition change or BMP found ineffective
 - Minimize bare soil exposure
 - Maintain good housekeeping



Construction BMPs



- Erosion and sediment controls
- Storm water management
- Good housekeeping

Inspections

- BMP inspections
 - Once every 7 days, or
 - Once every 14 days and after every storm event
- Records
 - Maintenance activities
 - SWPPP modifications



Termination of Permit Coverage

- Terminate when project completed and property stabilized
 - 70% of original vegetation has been reestablished
- Submit Notice of Termination (NOT)
- Maintain records for 3 years



Identified Problems

- High visibility
 - Potential for NOV
- Major problem
 - Erosion control
 - Final stabilization





Sewage Sludge / Biosolids



Disposal of Sewage Sludge from FOTW

- Solid Waste Landfill
- Land Application
 - application of “biosolids” to land either to condition the soil or fertilize crops or other vegetation



Land Application of Biosolids

- Regulated by 40 CFR 503
- Requirements
 - pollutant limitations (metals)
 - pathogen reduction
 - vector attraction reduction
- Class A and B sludges



What Cannot Be Land Applied

- industrial sewage sludge
- hazardous sewage sludge (40 CFR 261)
- PCB concentration > 50 ppm
- drinking water treatment plant sludge



Spill Prevention Control and Countermeasures Plan (SPCCP)

- Facility document that describes the structural designs, equipment and procedures that are used to prevent spills of oil from reaching navigable waters
- AR 200-1 incorporates hazardous substances into the SPCCP

SPCCP Revisions

- Highlights
 - Exempts UG tanks (40 CFR 280), but includes home heating fuel tanks
 - Excludes storage containers < 55 gallons
 - Excludes oil/water separators, but includes oil filled equipment
 - Extends plan review to 5 year cycle
 - P.E. certification required for only technical amendments
 - Annual training for oil handling employees
- Deadline: October 31, 2007

Questions

- USACHPPM, William Fifty
 - William.Fifty@us.army.mil
 - (410) 436-3816

